MEETING OF DEPARTMENT OF ENERGY (DOE) OFFICE OF HEALTH STUDIES WITH MEDICAL CONSULTANTS FEBRUARY 14-15, 1995

Implementation of Public Law (P.L.) 3162
Medical Evaluation of Former Workers

1. **What are reasonable goals for a medical evaluation program?**

   - initial program should be focused on diseases that are consistent with exposures in populations known or reasonably assumed to have average or above average exposures to these disease-causing agents.

   - the focus of the program is primarily on tertiary prevention for former workers, diagnosis, ongoing evaluation, and treatment (not primary or secondary prevention).

   - the program should seek to identify disease from past exposures even if the disease is neither progressive nor treatable.

   - attributable risk, the predictive value of screening tests, and knowledge of exposure/outcome relationships should all be considered to the extent feasible in decisions to offer medical surveillance.

   - followup of both occupational and nonoccupational conditions diagnosed as part of this program must be integral to the program.

   - workers must be clearly informed/educated regarding the reasons for offering the evaluation and what to expect from the examinations and testing to be performed.

   - health care providers must clearly understand the rationale for offering surveillance and their role and responsibilities regarding the interpretation of test results, any treatment modalities, and any referrals or followup necessitated by medical findings.

   - exposure candidates for an initial program include:

     o beryllium exposure
     o asbestos exposure
     o radiation exposure

   - at this time there are no appropriate tests and/or evaluations that would be suitable for monitoring former workers exposed to solvents and/or heavy metals (lead, cadmium, chromium, uranium, mercury, and nickel). Currently, available screening tests either lack sensitivity, are nonspecific, or are not sufficiently predictive to diagnose conditions that may be chronic sequelae of these exposures.

Two Important Premises

- many former DOE workers were enrolled in medical surveillance programs while they were employed that were designed to monitor for effects of acute exposures (e.g., lead, hearing conservation). The purposes of such programs were to complement exposure control programs and to detect early health problems at a point where effects were reversible. In the context of screening former workers, such tests (such as blood lead levels, radiation biodosimetry) are of little or no value in detecting those chronic conditions of concern to this group, with the exceptions of those exposures noted above.

- the medical surveillance called for in this program is not designed as an alternative to the appropriate adjudication of and proper compensation for work-related diseases. A separate process should be developed for former workers who develop diseases felt to be related to work exposures that occurred while employed at a DOE site.

2. Given the goals of the medical surveillance program, what medical evaluations and exposed people should be included?

HIGH LEVEL RADIATION EXPOSURE

- select a lifetime dose to define an "at-risk" population (e.g., 40 REM cumulative dose). Approximately 1000-2000 former workers. Inclusion based on dosimetry reflecting total effective dose equivalents (TEDE).

- perform a thorough, interim medical history and review of systems. Use the work history to obtain information about other potential exposures while employed at DOE, and any subsequent or current exposures from other jobs.

- offer a targeted physical examination and laboratory testing (e.g., focused on the thyroid, skin, and breast with mammography as appropriate, complete blood count).

- the periodicity of testing (such as recommendations regarding mammography) should be based on ACS, ACP, Canadian, or U.S. Preventive Services Task Force guidelines (the most recent).

BERYLLIUM EXPOSED WORKERS

- use present programs being offered former beryllium workers at Rocky Flats and Y-12 as models.

- include all workers previously identified as "beryllium workers" by medical departments. Target workers in high risk populations (craft workers, electricians) for inclusion based on job tasks and operations with known potential for beryllium exposure. Provide mechanism for "self-identification" (e.g., letters to all former workers in a particular building regardless of job title) given rarity of exposure and cases of disease with seemingly incidental or short-term, high level exposure.

- perform a thorough, interim medical history and review of systems with a focus on the respiratory system and smoking history (use of ATS questionnaire or modification thereof). Use the history to obtain information about other potential exposures while employed at DOE, and any subsequent or current exposures from other jobs.

- offer peripheral lymphocyte testing (LPT) for beryllium sensitivity and a chest X-ray (CXR). Where possible, obtain previous CXR for comparison purposes.

- develop clinical guidelines for the followup of a positive LPT. Recommendations regarding the periodicity of testing should be included in the development of the clinical guidelines.

- insure that workers are appropriately informed of the results and their significance.

ASBESTOS EXPOSED WORKERS

- program should be offered to individuals based on assessment of risk of exposure based on job title, such as the following:

  1. insulators, pipefitters, heating/ventilation installation and repair, plumbers, maintenance workers, boilermakers, stationary operating engineers, employees known to have asbestosis;

  2. construction workers, electricians, carpenters, sheetmetal workers, beryllium workers, and those enrolled in asbestos screening while currently employed;

  3. janitors, glaziers, automobile maintenance, road crews, and

  4. others.

- as a first cut, program should be offered to all workers in aforementioned categories 1 and 2

- screening should include (based on Occupational Safety and Health Administration (OSHA) standard):

  CXR (PA) - (read routinely then in bulk by an ILO reader)
  Spirometry
  Questionnaire/initial/followup/see above
  Directed physical examination

- guidelines for consistent followup of abnormalities found on screening need to be developed. Current followup recommendations should be considered in developing these guidelines. For example, a followup examination may included determinations of diffusion capacity, 25-75 percent FEF (mid-maximal expiratory flow), etc.

- periodicity (less frequent than OSHA recommended):

  Day 1 - followup - as indicated
  5 years
  10 years

  Enrollment in the program should be conducted to insure steady flow of workers to be screened

  No further followup for this condition unless medically indicated

- quality assurance

  provide screening at limited number of venues;
  insure quality control of spirometry

  use limited number of ILO readers with Q/A measures in place (e.g., random distribution of films, use of "trigger films")

  use standardized questionnaire in a "database" framework; insure uniform administration.

BLADDER CANCER

The available data are suggestive but, at this time, do not justify the risks of a screening program. Further surveillance of gas centrifuge workers where an excess of bladder cancer has been observed should be conducted in the context of a well-designed study that monitors the efficacy and risks of screening this population.

3. **How can we assemble and analyze the data we collect in order to further refine the tests and selection of workers to be screened?**

   - data should be collected electronically in standardized formats. The format developed by the Association of Occupational and Environmental Clinics could serve as a starting point for developing a tool to collect information. The Department of Veterans Affairs' experience with centralized data collection is an additional resource.

   - centralized data collection should focus on "administrative" data including: demographic data, job title and work history, site, ICD code.

   - consideration should be given to collecting information, such as the ILO chest X-ray reading and spirometry results.

   - data analyses should serve as:

     (1) an administrative resource for predicting and adjusting utilization of surveillance;

     (2) a resource for studies of the natural history of the diseases; and

     (3) as a heuristic resource for initiating epidemiologic investigations.

   - contracts with providers should clearly specify data reporting, record keeping, and storage requirements.

4. What is the most effective way to inform workers of the screening results?

- all participants should receive letters notifying them of all results.

- the responsibility should be with the care providers to provide consultation and followup as necessary, including being available on the telephone for questions. This responsibility should be clearly articulated in all contracts with providers.

- model standardized notification letters, which individual providers can change to fit their practice should be developed to insure clear, appropriate and accurate transmission of surveillance results.

- coordination of and payment for followup are not medical issues, but need to be resolved to make the program work.

5. How should care/services be delivered?

- services should be provided by occupational medicine specialists.

- there should be quality assurance for the services provided in both selection of providers (e.g., AOEC, ACOEM, DOE clinics, and board certification) and in the management of services.

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Dear Dr. Curtis:

Thank you for your participation in our meeting on February 14-15, 1995. The Department of Energy's (DOE) task in response to a congressional mandate to design a medical surveillance program for our former workers is a challenging one.

We greatly appreciate your taking the time on such short notice to share your expertise and actively participate in our panel. Your efforts will serve DOE well in providing a program that serves the health needs and concerns of hundreds of thousands of our former workers. We are confident that you and the panel have produced a draft that will be of great use in the meetings and discussions to come.

Enclosed is the product of our deliberations for your review. Please call with any additions, corrections, or comments that you may have.

It was a pleasure meeting you. Once again, my sincere thanks for your assistance and guidance.

Sincerely,

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for Health Studies

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Enclosure